

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-11 (canceled)

Claim 12 (currently amended): The process according to claim 24, wherein the initiator molecule comprises a chlorosilane, an alkoxysilane, a disulphide or a thiol group.

Claim 13 (currently amended): The process according to claims 24 or 12 wherein the initiator molecule comprises a group chosen from azo groups, peroxo groups, or a ketone group in conjugation with an aromatic system.

Claim 14 (currently amended): The process according to claim 13, wherein the initiator molecule comprises a group chosen from aromatic ketones or aromatic ketones containing sulphur.

Claims 15-23 (canceled)

Claim 24 (currently amended): A process for the production of a surface comprising ~~polyfunctional copolymer monolayer, comprising an assembly of~~ single copolymer chains attached to a said surface, wherein each copolymer chain comprises a ~~multitude of identical or different units carrying one or more~~ functional groups which allows ~~an~~ interaction of the copolymer chain with a sample or probe molecule, comprising the steps of:

a) immobilizing a monolayer of radical polymerization initiators molecules on said surface to produce an initiated surface, wherein each of said initiators molecules comprises ~~one or more~~ a functional groups for linkage to the surface and a functional group for subsequent initiation of a polymerization reactions on said initiated surface;

b) initiating polymerization reactions on said initiated surface ~~in the presence of~~ with (a) a first set of identical or non-identical monomers, each of which comprises (1) at least one functional group which ~~can~~ interacts with a sample or probe molecule and (2)

at least one C-C double bond, and (b) a comonomer containing at least one C-C double bond, and then

c) growing copolymer chains from said initiated surface in the presence of said set of monomers and said comonomer by a radical polymerization chain reaction involving reaction of the C-C double bond of said set of monomers and said comonomer;

wherein the ~~assembly~~ growing of the copolymer chains ~~produced~~ in step c) linked to said surface results in ~~a polyfunctional~~ single copolymer chains attached at a terminus thereof to said surface, and which interact with a sample or probe molecule on said surface monolayer.